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Masculinity and engagement in HIV care among male fisherfolk on HIV treatment in Uganda

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ABSTRACT

This study explored the intersection of masculinity and HIV care engagement among fishermen and other male fisherfolk on antiretroviral therapy (ART) in Wakiso District, Uganda. We conducted 30 in-depth interviews with men on ART recruited from HIV treatment sites and used a thematic analysis approach. Since HIV diagnosis and ART initiation, men had adopted masculine identities more conducive to HIV care engagement. The masculine roles of worker and provider, husband and sexual partner and the appearance of physical strength were compromised by HIV, but restored by ART's positive effects on health. Peers also emerged as facilitators to HIV care, with men supporting each other to seek testing and treatment. However, structural and occupational barriers to HIV care associated with the masculine role of worker remained a barrier to care engagement. Findings suggest that emphasising the benefits of ART in bolstering men's ability to fulfil the roles important to them may improve the effectiveness of HIV testing and treatment messaging for men. Differentiated care models that address structural-level barriers to care, and community-level gender-transformative programming to help fishermen engage in HIV care, may be beneficial.

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Introduction

Epidemiological studies in sub-Saharan Africa have brought to light a significant gender disparity in the provision and uptake of HIV treatment and care (Cornell, McIntyre and Myer 2011; Tromp et al. 2014; Shand et al. 2014; Beckham et al. 2016). Despite men's higher social status and greater access to resources, men living with HIV are more likely to access care at an advanced disease stage and have worse treatment outcomes, including higher mortality, compared to HIV-infected women (Cornell, McIntyre and Myer 2011; Tromp et al. 2014; Shand et al. 2014; Beckham et al. 2016; UNAIDS 2017). Norms of masculinity, or social expectations about appropriate roles

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and behaviour for men (World Health Organization 2007), are recognised as an important influence on men's health behaviours generally (Fleming and Dworkin 2016; Baker et al. 2014; World Health Organization 2007; Courtenay 2000), and a contributing factor to HIV infection among men (Shannon et al. 2012; Gottert 2014; Jewkes et al. 2010).

Ugandan fisherfolk living and working in Lake Victoria communities are considered a priority population for HIV prevention and treatment efforts in Uganda (Uganda Ministry of Health 2016), with prevalence estimated to be 20%–30% (Seeley et al. 2012; Opio, Muyonga and Mulumba 2013). In addition to numerous structural and social barriers to accessing HIV care, such as frequent mobility and alcohol use (Bogart et al. 2016; Tumwesigye et al. 2012), fishing villages have been characterised as 'hyper-masculine' environments (Seeley and Allison 2005; Allison and Seeley 2004). Although the construction of masculinity has not been empirically studied in this setting, the occurrence of heavy alcohol use and transactional sex have been attributed to masculine norms promoting specific forms of risk behaviour (Tumwesigye et al. 2012; Kiwanuka et al. 2013), which may also be harmful to men's engagement in HIV care.

Studies by Siu and colleagues (2012, 2013, 2014a, 2014b) have qualitatively examined masculine norms and men's engagement in HIV care in Ugandan mining towns, which are similar to fishing villages in that both report elevated HIV prevalence and are composed of young and/or single men clustered for work. The authors' draw on Connell's (1987; Connell and Messerschmidt 2005) concept of hegemonic masculinity, which constitutes an idealised consensual understanding of what masculinity should look like in a socio-cultural context. They also draw on Wilson's (1969) early ethnographic work which contests that two dominant forms of hegemonic masculinity exist across cultural settings. The ideal 'reputation-based' masculine identity includes the belief that men should be dominant over women, aggressive, sexually successful with women and be perceived as strong and in turn healthy (Siu, Seeley and Wight 2013; Siu, Wight and Seeley 2014a; Barker and Ricardo 2005; Sikweyiya, Jewkes and Dunkle 2014). On the other hand, the 'respectability-based' masculine identity emphasises the role of men as providers and the expectation that men ensure the survival of the family line through childbearing (Sikweyiya, Jewkes and Dunkle 2014; Siu, Seeley and Wight 2013; Siu, Wight and Seeley 2014a). The authors conclude that these different masculine ideologies relate to Ugandan miners' treatment-seeking behaviours. Men adhering to reputation-based gender roles related to strength and sexual prowess were less likely to be engaged in HIV care. The clinic was viewed as a place for women, and men feared that disclosure of their HIV status would make them appear weak and less competitive in finding sexual partners compared to HIV-negative men (Siu, Wight and Seeley 2014a, 2014b). In contrast, men whose masculine ideals were centred on the traditional role of father and provider were motivated by these roles to stay healthy by seeking testing and treatment (Siu, Seeley and Wight 2013; Siu, Wight and Seeley 2014a, 2014b).

A recent scoping review of qualitative studies across 10 countries in sub-Saharan Africa similarly supports the role of masculine norms in HIV care engagement, but found specific masculine norms can dually serve as both barriers and facilitators (Sileo,

Fielding-Miller et al. 2017). For example, while notions of the 'respectability-based' masculine identity did emerge as a *facilitator to care* for men who believed antiretroviral treatment (ART) would allow them to reassume masculine roles and relationships, these same norms served as *barriers to care* for other men. Specifically, men who feared that HIV would threaten traditional roles, such as father and husband, avoided HIV testing, treatment uptake and clinic attendance. Other masculine notions that served as barriers to care engagement included strength and self-reliance, emotional inexpressiveness and sexual success with women.

The present study aimed to extend current understanding of the association between masculine norms and HIV care engagement outcomes by exploring these relationships among fishermen living with HIV in fishing villages in Uganda. While the literature suggests masculine norms can dually serve as barriers and facilitators to men's engagement in care, further investigation is needed on the circumstances and contexts in which these norms emerge as a facilitator versus a barrier to care. Moreover, fisherfolk are a high-risk population for HIV being prioritised for the scale-up of HIV testing and treatment by the Ugandan Ministry of Health. However, little data exist on their engagement in HIV care, making them an important population to study. The primary goal of this study therefore was to examine how HIV and ART affect men's masculine ideologies and role fulfilment, and how notions of masculinity influence men's engagement in HIV care (i.e. ART adherence, clinic attendance) for men on ART in Ugandan fishing communities.

Methods

This study was conducted in Wakiso District, Uganda. Recruitment was conducted in partnership with Mildmay Uganda, a non-governmental organisation that supports the Ugandan Ministry of Health to provide free HIV testing and treatment across several districts in Uganda. Participants were drawn from a sample of patients attending Mildmay-supported outreach clinics and public health facilities serving large populations of fisherfolk. There were seven research sites in total, including three sites on land (Kasenyi outreach site, Entebbe Hospital and Kigungu Health Center III) and four island sites on Bussi, Zzinga and Kachanga Islands (Rapha Medical Center, Zzinga Island outreach site, Bussi Health Center II and Kachanga Island outreach site).

Recruitment and data collection took place between October 2016 and March 2017 and were part of a larger mixed-methods study that included a quantitative survey with a sample of 300 men. The data analysed and presented for this paper derive from a subsample of these men completing an in-depth interview ($n = 30$). During HIV clinic days, clinic staff and a trained male research assistant reviewed clinic records to pre-screen eligible participants, and non-randomly approached potentially eligible men for further eligibility screening. Men were also informed of the study during routine reminder phone calls for upcoming or missed appointments from clinic staff.

Patients were eligible to participate in in-depth interviews if they first consented and participated in the quantitative portion of the study, which had the following inclusion criteria: male, at least 18 years of age, in an occupation supporting the fish industry, living with HIV, in receipt of ART for at least 6 months (to assess adherence).

For participation in in-depth interviews, we additionally ensured that at least half of men participating reported difficulty with adherence (self-reporting any missed pills in prior 4 days) and reported any alcohol use in the prior 30 days, to explore barriers to ART adherence and the role of alcohol use (issues examined in a separate paper). Of the 35 eligible men invited to participate in the in-depth interview, 5 declined participation due to time constraints.

The same male research assistant (WK) carried out all data collection procedures, including recruitment, informed consent and conducting the interviews. The research assistant was fluent in English and Luganda, experienced in qualitative research and received further training by the first author. Due to low literacy in the study population, the consent form was read aloud to participants and participants provided a signature or thumbprint to designate informed consent with a witness present. Men then completed a one-on-one interview with the research assistant in a private setting in the clinic or another agreed-upon location, which was audio recorded and lasted approximately 40 minutes. We enrolled men until saturation was reached, which was determined by consultation with the research assistant and on-going review of the transcribed interviews by the first author. Men received 15,000 Ugandan Shillings (∼US$4) for participating in the interview. All procedures were approved by Makerere University School of Public Health and San Diego State University institutional review boards, as well as by the Uganda National Council for Science and Technology.

In this paper, we include selected data from the quantitative questionnaire administered as part of the larger study to characterise the sample of 30 men completing in-depth interviews, including their socio-demographic characteristics and overall engagement in HIV care. In the larger study, the Adult AIDS Clinical Trial Group (AACTG) scale was used to measure self-reported ART adherence (Chesney et al. 2000), which included recall questions about antiretrovirals (ARVs) missed for the previous four days prior to the interview. We operationalised adherence in terms of the proportion of ARVs taken in the prior four days, out of the total ARVs prescribed. We measured retention in care by calculating the proportion of kept appointments in the prior year using data extracted from participants' clinic records (the number of clinic visits scheduled in the prior year, and the number of those kept as scheduled).

The in-depth interviews followed a semi-structured interview guide modelled after an interview protocol used for a study with broadly similar aims in South Africa (Gottert 2014), but adapted to our population. The guide included questions about masculinity, including what it means to be a man and what roles men are expected to fulfil in the community. We also asked men to name up to three roles that they felt were the most important to them to fulfil presently or in the future (e.g. fatherhood, fisherman, sexual partner). We probed further into how being diagnosed with HIV affected the participant's sense of manhood and ability to fulfil each of the roles they named. We then asked men to describe how taking ART had positively or negatively affected these roles and how these roles affected their ability to take ART, probing for specific examples and narratives when possible. This line of questioning was intended to elicit prevalent notions of masculinity and men's expected roles in our sample, and how these constructs might impede or bolster their engagement in HIV care, focusing specifically on ART adherence and HIV clinic attendance.

Data analysis

The research assistant who conducted the in-depth interviews transcribed and translated verbatim 17 of the 30 audio files from Luganda to English. An additional translator transcribed and translated 13 of the 30 in-depth interviews, with the research assistant reviewing transcripts if the translator reported any difficulty. We used a thematic approach to analyse the transcripts (Saldaña 2015). We first developed a coding scheme to identify notions of masculinity, informed by Connell's Theory of Hegemonic Gender Roles and Theory of Gender and Power (Connell 1987; Connell and Messerschmidt 2005) and a recent systematic review of norms of masculinity and HIV care engagement in sub-Saharan Africa (Sileo, Fielding-Miller et al. 2017). After an initial review of the transcribed data, the coding scheme was modified based on the data. Data were extracted, and the narratives coded to indicate the aspect(s) of masculinity referenced (e.g. provider, strength), the stage of HIV care referenced (e.g. ARV adherence, clinic attendance) and whether aspects of masculinity had a positive or negative influence on men's engagement (i.e. served as barriers or facilitators). The first author and a US public health student trained in qualitative data analysis independently reviewed and coded the data. Discrepancies were discussed until consensus was reached. We iteratively reviewed the coded data to identify major themes.

Results

Sociodemographic characteristics

The average age of men was approximately 34 years (mean = 33.8, SD = 6.1, range: 20–50). Nearly half of men were married and living with their spouse (46.7%); the other half were never married, divorced, widowed or separated. Most men reported no schooling (60.0%), and 90.0% of men were employed as fishermen. Men's average monthly income was the equivalent of approximately US$75.30 (SD = 51.3). The mean time spent travelling to the HIV clinic was nearly one hour (SD = 56.6), and men had been aware of their HIV status for an average of 21.4 months (SD = 10.0) and had initiated ART soon after diagnosis (mean = 18.9 months, SD = 19.5). In the prior year, men had kept only half (51.9%, SD = 34.8%) of their HIV clinic appointments as scheduled. Over the four-day recall period, men reported taking on average 70.8% of their prescribed ARV pills, with 60.0% of men classified as being 'sub-optimally adherent' (<95% of pills taken as prescribed). Fourteen of the 30 men had a viral load taken within the month prior to the interview, of which 53.3% (n = 8) were non-detectable, and 46.7% (n = 7) were detectable; viral load data were not available for the rest of the sample (n = 16). See Table 1 for a summary of participant characteristics.

Masculinity, HIV and engagement in HIV care

Although men shared several ways in which living with HIV had both positively and negatively affected their masculinity, the consensus was that being diagnosed with HIV had overall positive effects on their lives and over time had transformed their definition of what it means to be a man.

Table 1. Participant characteristics, Uganda, 2016–17, N = 30.

	n (%)/Mean	SD	Range
Socio-demographic characteristics			
Age	33.8	6.9	20–50
Marital status			
Never married	3 (10.0%)		
Divorced	9 (30.0%)		
Widowed	1 (3.3%)		
Married and separated	3 (10.0%)		
Married and living together	14 (46.7%)		
Education			
No schooling	18 (60.0%)		
Primary level	8 (26.7%)		
Secondary level	4 (13.3%)		
Monthly income (approximate US$)	75.3	51.3	22.2–250.0
Occupation			
Fishermen	27 (90.0%)		
Other (fish seller, boat operator, boat loader)	3 (10.0%)		
Mobility (travelled/slept away in prior year)			
Yes	23 (76.7%)		
No	7 (23.3%)		
Travel time to clinic (minutes)	58.6	56.6	2–240
Months since HIV diagnosis	21.4	10.3	8–46
Months since ART initiation	18.9	19.5	4–45
Engagement outcomes			
Retention (proportion of kept clinic appointments prior year)	51.9%	34.8%	0%–100%
ART adherence (% of pills taken as prescribed)	70.8%	30.9%	0%–100%
Optimal adherence			
Yes, at least 95% of pills taken	12 (40.0%)		
No, <95% of pills taken	18 (60.0%)		

Note: ART = antiretroviral therapy

Men's role of provider and worker, and ART's restorative effects

The most commonly cited facilitator to HIV care engagement was men's desire to fulfil their role as provider. Being diagnosed with HIV motivated men to take this role more seriously, and to begin setting goals, saving money and planning for the future. As one boat loader explained,

> Getting HIV has even been helpful, because I would have died in an accident or in a different way, when I don't have any thought of planning for my child, while I am wasted in alcohol. However, after quitting alcohol, I save each penny I get on planning for my child, such that by the time I leave this earth I have bought him a plot of land and built [a house] for him. (Boat loader, age 30)

While HIV negatively affected men's ability to provide by reducing their strength and ability to do strenuous labour and earn money, men's narratives suggested their fear of failing in the roles important to them was greatest initially after diagnosis, and over time ameliorated as men experienced improvements in their health due to ART. Most men recognised their HIV medication as central to their ability to fulfil these roles and accomplish future goals through the return of their physical strength due to ART, as one fisherman (age 30) explained: 'Before being initiated on ART, I used not to have energy for digging [in a garden] but now I can take longer hours while digging'.

For men with children and wives, the desire to fulfil their role as provider was tied to the value placed on being a husband and father, which was cited as the reason men took their HIV medication. In turn, men expressed an overall reduction in

unhealthy behaviours, including alcohol consumption, the number of sexual partners and generally disassociating with a 'party' lifestyle – which many participants said they engaged in prior to their diagnosis, and which was perceived as part of the culture of fishermen and life on the islands. Single men cited the desire to find a wife and become a father as their motivation for continued HIV treatment and had similar aspirations of bettering their financial situation to provide for their future family.

In two ways the masculine roles of worker and provider serve as barriers to HIV care. First, for a smaller group of men on ART for less than one year, whose energy levels had not fully recovered after ART, the side effects of ART (fatigue, dizziness) affected their ability to work. Given most fisherfolk engage in strenuous labour, these side effects were worrisome; several men said they skipped doses on nights that they went out fishing for this reason and had considered discontinuing their medication because of its negative effects on their work.

> They made me feel a lot of dizziness after swallowing those [ARV] drugs. I couldn't sail on the lake. In fact, I found out that I could even fall into the water! So, I cannot hide this from you; if I get a deal of sailing people … since I usually return home at 12am or 1am, I would miss swallowing [my ARVs] that day. (Boat operator, age 32)

The nature of men's work also emerged as a barrier to both attending clinic appointments and ART adherence, including irregular work schedules, fishing overnight and over several days and frequent mobility for work. Common among men's narratives were stories of being stuck on the lake longer than expected or travelling to distant islands to fish, leading to missed clinic visits or not having enough ART with them on the lake. Men's socioeconomic status was an underlying issue in nearly all of the narratives, with men stating that having financial stability would reduce these issues significantly, as one man explained:

> You see the challenge that most of us have faced is that we are poor; the illness finds us in poverty. So, you have to strive hard to look for money and that involves use of a lot of energy, which is a very big challenge. (Boat operator, age 32)

HIV as a threat to marriage and sexual relationships, and the restorative effects of ART

In one-third of the interviews, men described how their HIV diagnosis had threatened their role as husband and relationships with women. This most commonly was described in terms of partners leaving them after being diagnosed with HIV, losing partners to HIV-related death, feeling that their HIV status hurt their chances of finding new sexual partners/spouses and experiencing a reduced sexual drive or energy for sex due to HIV-related illness and ART side effects. However, except for several men reporting reduced sex drive due to ART side effects, most men noted ART had restored their sex lives and relationships with women by reviving their overall energy levels and sex drive to levels experienced before the onset of HIV-related illness. For example:

> When I was sick I couldn't sleep with any woman, but now I have a wife and there is no problem now … and the other thing is that if you are swallowing these [ARV] drugs, there is a way they boost your libido. (Fisherman, age 32)

Relatedly, men who reported no change in their physical or social functioning because of HIV attributed their ability to continue fulfilling these masculine roles to taking ART as prescribed and following their provider's guidance. In only a few cases did men describe their role as a spouse/partner as a barrier to care. For these men, the fear that HIV status disclosure would hurt their relationships led them to hide their HIV medications from spouses and partners to preserve these relationships, which sometimes resulted in missing their ARV doses.

> The way that it [HIV] affected me is that when you bring in a wife, you will have to sneak around to swallow your pills, but if you are not sick, you freely bring in women without any fear. However, some of us keep the tablets under the bed where we swallow from! (Boat loader, age 30).

Male peers encouraging HIV care engagement

When asked about their daily routines, participants described a significant amount of time spent among male peers, co-workers and male family members, both working and socialising with men. Men's role among male peers emerged as important to some men's engagement in HIV care; when asked what motivated men to test for HIV, several men said they had been encouraged to test by their friends. As one fisherman shared:

> Before being diagnosed with HIV, I used to fall sick all the time, yet I know of friends who have already initiated on ART therapy. So, my friends would advise me that why don't you go to a health facility such that you can be checked. (Fisherman, age 23)

While wives/partners often served as treatment support for men, male peers/family members also served in this role. Moreover, participants described assuming the role of treatment supporter themselves for other men since experiencing the benefits of ART, with several promoting HIV awareness and testing even more broadly in the community.

Knowing other men on ART not only provided participants with a network of treatment supporters, but also normalised HIV to an extent, reducing the fear of experiencing HIV stigma and discrimination from being seen at the clinic or known as living with HIV in the community. Moreover, men referred to other men living with HIV in the community that they respected and perceived as strong and healthy, as one fisherman (age 32) stated: 'I have been seeing very strong men of whom they tell me that they are on ART treatment, yet they look very strong. That has encouraged me to continue taking my ARVs'. Seeing other men continue to lead productive lives despite being HIV-infected served as evidence of the efficacy of ART for men and gave men hope that they could also live a long, productive life if they remain in care.

The appearance of physical strength, and ART's restorative effects

When asked about their decision to test for HIV and link to care, most men shared that they had not done so until HIV had taken a visible toll on their body, and the symptoms worsened to the point of no longer being able to carry out their responsibilities. Men's reliance on physical strength despite other symptoms may therefore

play a role in the tendency for some to seek care late, with an advanced disease stage. Although the value men place on their physical strength was clearly tied to their ability to work as described earlier, men separately valued the appearance of physical strength as central to their self-worth. Thus, the restoration of men's physical appearance after ART motivated men to stay engaged in care, with several narratives suggesting a healthy physical appearance and continued functioning in society was protective against HIV stigma for men, as explained by one fisherman (age 25): 'According to the way I initiated on ART, I was looking good. Therefore, I have never got any stigmatising statement because I stayed looking good'.

Discussion

Findings from this study demonstrate the importance of masculine norms in men's engagement in HIV care among Ugandan fishermen on ART. HIV was viewed as threatening to the notion that men should be and appear physically strong, be a financial provider, have a strong work ethic and maintain relationships with women; other studies in sub-Saharan Africa qualitatively link these notions of masculinity to reduced HIV testing and treatment uptake (Siu, Wight and Seeley 2012, 2014a, 2014b; Siu, Seeley and Wight 2013; Van Heerden, Msweli and Van Rooyen 2015; Zissette et al. 2016; Skovdal et al. 2011; Wyrod 2011; Russell et al. 2016). However, in our sample, men's narratives suggested the ability to overcome these barriers through ART, which helped men to restore and maintain their masculine roles and motivated them to remain in care. Although Ugandan fishermen are commonly portrayed as a hyper-masculine subculture engaging in risk-related sexual and drinking behaviour (e.g. Allison and Seeley 2004), in our sample we found men's HIV diagnosis had motivated them to make efforts to reduce risk behaviours and embrace a healthy lifestyle inclusive of HIV treatment, driven by the desire to better fulfil the masculine roles important to them. Other studies in the region similarly report HIV may 'dent' or damage men's notions of masculinity, but some men are able to 'resuscitate' their masculinity to be more in line with a good patient (Zissette et al. 2016; Skovdal et al. 2011; Siu, Wight and Seeley 2014a).

Our findings support the notion that masculine norms are fluid and adaptable (Dworkin, Treves-Kagan and Lippman 2013; Dworkin, Fleming and Colvin 2015) and highlight some of the positive influences of masculinity on health, which may be harnessed to improve men's engagement in care – an important contribution to a literature more focused on 'harmful' notions of masculinity. Providing men with safe spaces to cope with their HIV diagnosis and reflect on their health-seeking behaviour may help facilitate men to restore their masculinity after diagnosis and adopt a masculine identity conducive with treatment engagement. The reshaping of gender norms and promotion of more equitable relationships between men and women through a gender-transformative approach have been used with success in gender-based violence and HIV risk reduction interventions with men and women (Dworkin, Fleming and Colvin 2015; Dworkin, Treves-Kagan and Lippman 2013; Barker, Ricardo and Nascimento 2007), and Fleming et al.'s (2016) recent qualitative study similarly

demonstrates the potential for transformative programming to help men overcome masculinity-related barriers to HIV testing and treatment uptake.

Our study provides data specific to the social context and construction of masculinity among fishermen to inform the development of gender-transformative programming and the tailoring of HIV counselling to men in this setting. In line with other research (Siu, Wight and Seeley 2012, 2014a, 2014b; Siu, Seeley and Wight 2013), we found 'respectability'-based norms of masculinity were in line with care engagement. HIV programming that promotes these notions of masculinity, and facilitates men's understanding of the link between HIV care engagement, good health and their ability to obtain financial and business success and subsequently provide for their families, may resonate with fisherfolk. However, rigorous evaluations are still needed to test this approach with HIV engagement outcomes, and to understand ways to intervene on the broader structures that shape gender norms beyond the individual.

Although narratives suggested the ability to overcome normative barriers to care, the conflict between men's role as worker/provider and patient may be more challenging to overcome in this setting. Other studies similarly report clinic services not being tailored to men's needs contributing to men's absence in HIV care (Skovdal et al. 2011; Stern, Clarfelt and Buikema 2015; Bila and Egrot 2009; Zissette et al. 2016). Structural barriers are heightened among fisherfolk, given the mobile nature of fishing occupations and the environment of Lake Victoria (Seeley and Allison 2005; Sileo, Kintu et al. 2016). Men's narratives suggest these barriers are most detrimental to care access for economically disadvantaged men, highlighting the intersectionality between masculinity and economic status (Dworkin, Fleming and Colvin 2015). Conflicting and unpredictable work schedules, mobility and transport issues may explain the discordance between narratives of 'transformed masculinity' and high motivation for HIV treatment in our sample, yet sub-optimal adherence and clinic attendance. There has been a call in the literature for HIV services to accommodate structural barriers that disadvantage key populations through the development of differentiated care models tailored to specific population needs (Macdonald, Verster and Baggaley 2017) and for policy and institution-level change to address gender inequities in HIV care (Dovel et al. 2015; Fleming and Dworkin 2016; Dworkin, Fleming and Colvin 2015). In our study setting, some gender-sensitive strategies to accommodate fishermen's accessibility were being implemented. However, our findings also demonstrate the need to develop new approaches to address male-specific barriers to care.

Our findings suggest social network/peer-based interventions for fishermen should be explored. With half of the men in our sample unmarried, we found men relied heavily on a network of male peers for emotional and instrumental support, which may be unique to fishing villages and other settings where men gather for work. Male peers encouraged each other to seek HIV testing and treatment, and served as sources of treatment support for one another, which has been found in similar mining communities where men gather for work (Siu, Wight and Seeley 2014b). Knowing other HIV-infected men with the reputation of being strong, successful and respected in the community normalised HIV for men and reduced the fear of experiencing stigma if seen at the clinic. Thus, leveraging men's existing networks in community-based ART delivery models (e.g. adherence clubs, community ART groups) (Tsondai et al. 2017;

Grimsrud et al. 2015; Prust et al. 2017) may be a useful strategy to increase HIV-infected fishermen's engagement in care. The integration of peers or 'popular opinion leaders' in HIV programming more broadly shows promising effects on HIV care engagement outcomes with other key populations in sub-Saharan African settings (Govindasamy et al. 2014; Simoni et al. 2011).

This study adds to a growing body of research, building evidence that masculine norms may be driving men's poor engagement in HIV care. However, quantitative investigation is needed to extend our understanding of the wider association between masculine norms and engagement in HIV care; and a recent systematic review demonstrated that no quantitative studies in sub-Saharan Africa exist with this aim (Sileo, Fielding-Miller et al. 2017). The generalisability of our findings is limited, given the qualitative and cross-sectional nature of this study, as well as the use of purposive sampling of men experiencing adherence problems and men who drink. Since men were recruited from the HIV clinic, our sample did not capture men who were never linked to care or were lost to follow-up. Thus, our sample may over-represent men who are doing better with HIV care engagement overall and may not include men faced with the greatest barriers to care (e.g. mobility, stigma). In addition, fishing villages are often described as having a large population of younger men, but the mean age (34, range 20–50) in our sample was slightly older. Men not engaged in care, and younger men, may display more risk-prone masculinities and have greater difficulty adapting their masculine identities after HIV diagnosis as men in our sample described. Despite this, our study provides valuable insight into how masculine norms affect care engagement, and change over time for fisherfolk on ART, who were still struggling with adherence despite being sampled from the clinic.

Conclusions

Findings from this study demonstrate the importance of masculine norms and roles in men's engagement in HIV care among fisherfolk living with HIV. Though HIV emerged as threatening to men's notions of masculinity, ART's ability to restore and maintain masculine roles motivated men to remain in care. However, occupational and structural factors specific to men's role as worker remained as barriers to engagement in HIV care regardless of the motivation for treatment. Our findings highlight the potential to better tailor HIV testing and treatment messaging to men by emphasising the benefits of ART on bolstering men's roles and notions of masculinity important to them. We recommend future studies explore the use of gender-transformative counselling with men on ART to increase men's engagement in HIV care, as well as the development of differentiated service delivery tailored to the needs of fisherfolk to help men overcome structural and occupational barriers to care.

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References

Allison, E. H., and J. A. Seeley. 2004. "HIV and AIDS among Fisherfolk: A Threat to 'Responsible Fisheries'?" *Fish and Fisheries* 5 (3): 215–234.

Baker, P., S. L. Dworkin, S. Tong, I. Banks, T. Shand, and G. Yamey. 2014. The men's health gap: men must be included in the global health equity agenda *Bulletin of the World Health Organization* 92 (8): 618–620.

Barker, G., C. Ricardo, and M. Nascimento. 2007. "Engaging Men and Boys in Changing Gender Based Inequity in Health: Evidence from Programme Interventions." Geneva: World Health Organization.

Barker, G., and C. Ricardo. 2005. "Young Men and the Construction of Masculinity in sub-Saharan Africa: Implications for HIV/AIDS, Conflict, and Violence." *Social Development Papers: Conflict Prevention and Reconstruction, Paper 26*. Washington, DC: The World Bank.

Beckham, S. W., C. Beyrer, P. Luckow, M. Doherty, E. K. Negussie, and S. D. Baral. 2016. "Marked Sex Differences in All-Cause Mortality on Antiretroviral Therapy in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis." *Journal of the International AIDS Society* 19 (1): 21106. doi:10.7448/IAS.19.1.21106

Bila, B., and M. Egrot. 2009. "Gender Asymmetry in Healthcare-Facility Attendance of People Living with HIV/AIDS in Burkina Faso." *Social Science & Medicine* 69 (6): 854–61.

Bogart, L. M., R. Naigino, E. Maistrellis, G. J. Wagner, W. Musoke, B. Mukasa, R. Jumamil, and R. K. Wanyenze. 2016. "Barriers to Linkage to HIV Care in Ugandan Fisherfolk Communities: A Qualitative Analysis." *AIDS & Behavior* 20 (10):2464–2476.

Chesney, M. A., J. R. Ickovics, D. B. Chambers, A. L. Gifford, J. Neidig, B. Zwickl, A. W. Wu, and Patient Care Committee & Adherence Working Group of the Outcomes Committee of the Adult AIDS Clinical Trials Group (AACTG). 2000. "Self-reported adherence to antiretroviral medications among participants in HIV clinical trials: The AACTG Adherence Instruments." *AIDS Care* 12 (3): 255–266.

Connell, R. W. 1987. *Gender and Power: Society, the Person, and Gendered Politics*. Stanford, CA: Stanford University Press.

Connell, R. W., and J. W. Messerschmidt. 2005. "Hegemonic Masculinity: Rethinking the Concept." *Gender & Society* 19 (6): 829–859.

Cornell, M., J. McIntyre, and L. Myer. 2011. "Men and Antiretroviral Therapy in Africa: Our Blind Spot." *Tropical Medicine & International Health* 16 (7): 828–829.

Courtenay, W. H. 2000. "Constructions of Masculinity and Their Influence on Men's Well-Being: A Theory of Gender and Health." *Social Science & Medicine* 50 (10): 1385–1401.

Dovel K, S. Yeatman, S. Watkins, and M. Poulin. 2015. "Men's heightened risk of AIDS-related death: the legacy of gendered HIV testing and treatment strategies." *AIDS* 29: 1123–1125.

Dworkin, S. L., P. J. Fleming, and C. J. Colvin. 2015. "The Promises and Limitations of Gender-Transformative Health Programming with Men: Critical Reflections from the Field." *Culture Health & Sexuality* 17 (2): 128–143.

Dworkin, S. L., S. Treves-Kagan, and S. A. Lippman. 2013. "Gender-Transformative Interventions to Reduce HIV Risks and Violence with Heterosexually-Active Men: A Review of the Global Evidence." *AIDS & Behavior* 17 (9): 2845–2863.

Fleming, P. J., and S. L. Dworkin. 2016. The importance of masculinity and gender norms for understanding institutional responses to HIV testing and treatment strategies. *AIDS* 30 (1): 157–158.

Fleming, P. J., C. Colvin, D. Peacock, and S. L. Dworkin 2016. "What Role Can Gender-Transformative Programming for Men Play in Increasing South African Men's HIV Testing and Engagement in HIV Care and Treatment?" *Culture, Health & Sexuality* 18 (11): 1251–1264.

Gottert, A. L. 2014. "Gender Norms, Masculine Gender-Role Strain, and HIV Risk Behaviors among Men in Rural South Africa." PhD Diss., University of North Carolina at Chapel Hill.

Govindasamy, D., J. Meghij, E. Kebede Negussi, R. C. Baggaley, N. Ford, and K. Kranzer. 2014. "Interventions to Improve or Facilitate Linkage to or Retention in Pre-ART (HIV) Care and Initiation of ART in Low- and Middle-Income Settings – A Systematic Review." *Journal of the International AIDS Society* 17 (1): 19032. doi:10.7448/IAS.17.1.19032

Grimsrud, A., J. Sharp, C. Kalombo, L. Bekker, and L. Myer. 2015. "Implementation of Community-Based Adherence Clubs for Stable Antiretroviral Therapy Patients in Cape Town, South Africa." *Journal of the International AIDS Society* 71 (1): e16–23. doi:10.1097/QAI.0000000000000863

Jewkes, R. K., K. Dunkle, M. Nduna, and N. Shai. 2010. "Intimate Partner Violence, Relationship Power Inequity, and Incidence of HIV Infection in Young Women in South Africa: A Cohort Study." *Lancet* 376 (9734): 41–48.

Kiwanuka, N., A. Ssetaala, J. Mpendo, M. Wambuzi, A. Nanvubya, S. Sigirenda, A. Nalutaaya, et al. 2013. "High HIV-1 Prevalence, Risk Behaviours, and Willingness to Participate in HIV Vaccine Trials in Fishing Communities on Lake Victoria, Uganda." *Journal of the International AIDS Society* 16 (1): 18621. doi:10.7448/IAS.16.1.18621

Macdonald, V., A. Verster, and R. Baggaley. 2017. "A Call for Differentiated Approaches to Delivering HIV Services to Key Populations." *Journal of the International AIDS Society* 20 (Supplement 4): 21658. doi:10.7448/IAS.20.5.21658

Opio, A., M. Muyonga, and N. Mulumba. 2013. "HIV Sero Behavioral Survey in Fishing Communities of the Lake Victoria Basin of Uganda." *PLoS One* 8 (8): e70770. doi:10.1371/journal.pone.0070770

Prust, M. L., C. K. Banda, R. Nyirenda, F. Chimbwandira, T. Kalua, A. Jahn, M. Eliya, et al. 2017. "Multi-Month Prescriptions, Fast-Track Refills, and Community ART Groups: Results from a Process Evaluation in Malawi on Using Differentiated Models of Care to Achieve National HIV Treatment Goals." *Journal of the International AIDS Society* 20 (Suppl 4): 21650. doi:10.7448/IAS.20.5.21650

Russell, S., F. Zalwango, S. Namukwaya, J. Katongole, R. Muhumuza, R. Nalugya, and J. Seeley. 2016. "Antiretroviral Therapy and Changing Patterns of HIV Stigmatisation in Entebbe, Uganda." *Sociology of Health & Illness* 38 (1): 58–72.

Saldaña, J. 2015. *The Coding Manual for Qualitative Researchers*. Thousand Oaks, CA: SAGE.

Seeley, J., J. Nakiyingi-Miiro, A. Kamali, J. Mpendo, G. Asiki, A. Abaasa, J. De Bont, L. Nielsen, and P. Kaleebu. 2012. "High HIV Incidence and Socio-Behavioral Risk Patterns in Fishing Communities on the Shores of Lake Victoria, Uganda." *Sexually Transmitted Diseases* 39 (6): 433–439.

Seeley, J. A., and E. H. Allison. 2005. "HIV/AIDS in Fishing Communities: Challenges to Delivering Antiretroviral Therapy to Vulnerable Groups." *AIDS Care* 17 (6): 688–697.

Shand, T., H. Thomson-de Boor, W. van den Berg, D. Peacock, and L. Pascoe. 2014. "The HIV Blind Spot: Men and HIV Testing, Treatment and Care in sub-Saharan Africa." *IDS Bulletin* 45 (1): 53–60.

Shannon, K., K. Leiter, N. Phaladze, Z. Hlanze, A. C. Tsai, M. Heisler, V. Iacopino, and S. D. Weiser. 2012. "Gender Inequity Norms are Associated with Increased Male-Perpetrated Rape and

Sexual Risks for HIV Infection in Botswana and Swaziland." *PLoS ONE* 7 (1): e28739. doi: 10.1371/journal.pone.0028739

Sikweyiya, Y. M., R. Jewkes, and K. Dunkle. 2014. "Impact of HIV on and the Constructions of Masculinities among HIV-Positive Men in South Africa: Implications for Secondary Prevention Programs." *Global Health Action* 7: 1-13. doi:10.3402/gha.v7.24631

Sileo, K. M., R. Fielding-Miller, S. L. Dworkin, and P. J. Fleming. 2017. The Role of Gender Norms and Masculinity on Men's Engagement in the HIV Care Continuum in sub-Saharan Africa: A Systematic Review. Paper presented at the 9th IAS Conference on HIV Science (IAS 2017), Paris, France, July 23–27.

Sileo, K. M., M. Kintu, P. Chanes-Mora, and S. M. Kiene. 2016. "Such Behaviors are Not in My Home Village, I Got Them Here": A Qualitative Study of the Influence of Contextual Factors on Alcohol and HIV Risk Behaviors in a Fishing Community on Lake Victoria, Uganda." *AIDS & Behavior* 20 (3): 537–547.

Simoni, J. M., K. M. Nelson, J. C. Franks, S. S. Yard, and K. Lehavot. 2011. "Are Peer Interventions for HIV Efficacious? A Systematic Review." *AIDS & Behavior* 15 (8): 1589–1595.

Siu, G. E., J. Seeley, and D. Wight. 2013. "Dividuality, Masculine Respectability and Reputation: How Masculinity Affects Men's Uptake of HIV Treatment in Rural Eastern Uganda." *Social Science & Medicine* 89: 45–52.

Siu, G. E., D. Wight, and J. Seeley. 2012. "How a Masculine Work Ethic and Economic Circumstances Affect Uptake of HIV Treatment: Experiences of Men from an Artisanal Gold Mining Community in Rural Eastern Uganda." *Journal of the International AIDS Society* 15 (Suppl 1): 1–9. doi:10.7448/ias.15.3.17368

Siu, G. E., D. Wight, and J. Seeley. 2014a. "'Dented' and 'Resuscitated' Masculinities: The Impact of HIV Diagnosis and/or Enrolment on Antiretroviral Treatment on Masculine Identities in Rural Eastern Uganda." *SAHARA-J: Journal of Social Aspects of HIV/AIDS* 11: 211–221.

Siu, G. E., D. Wight, and J. A. Seeley. 2014b. "Masculinity, Social Context and HIV Testing: An Ethnographic Study of Men in Busia district, Rural Eastern Uganda." *BMC Public Health* 14(33): 1–11. doi:10.1186/1471-2458-14-33

Skovdal, M., C. Campbell, C. Madanhire, Z. Mupambireyi, C. Nyamukapa, and S. Gregson. 2011. "Masculinity as a Barrier to Men's Use of HIV Services in Zimbabwe." *Global Health* 7 (13): 1–14. doi:10.1186/1744-8603-7-13

Stern, E., A. Clarfelt, and R. Buikema. 2015. "The Use of Sexual History Narratives to Assess Processes of Hegemonic Masculinity among South African Men in the Context of HIV/AIDS." *Men and Masculinities* 18 (3): 340–362.

Tromp, N., C. Michels, E. Mikkelsen, J. Hontelez, and R. Baltussen. 2014. "Equity in Utilization of Antiretroviral Therapy for HIV-Infected People in South Africa: A Systematic Review." *International Journal of Equity and Health* 13 (1): 1–17.

Tsondai, P. R., L. S. Wilkinson, A. Grimsrud, P. T. Mdlalo, A. Ullauri, and A. Boulle. 2017. "High Rates of Retention and Viral Suppression in the Scale-Up of Antiretroviral Therapy Adherence Clubs in Cape Town, South Africa." *Journal of the International AIDS Society* 20 (Supplement 4): 21649. doi: 10.7448/IAS.20.5.21649

Tumwesigye, N. M., L. Atuyambe, R. K. Wanyenze, S. P. Kibira, Q. Li, F. Wabwire-Mangen, and G. Wagner. 2012. "Alcohol Consumption and Risky Sexual Behaviour in the Fishing Communities: Evidence from Two Fish Landing Sites on Lake Victoria in Uganda." *BMC Public Health* 12: 1069. doi: 10.1186/1471-2458-12-1069

Uganda Ministry of Health. 2016. *Consolidated Guidelines for Prevention and Treatment of HIV in Uganda*. Kampala, Uganda: Ministry of Health.

UNAIDS. 2017. "Blind spot: Reaching out to men and boys – Addressing a blind spot in response to HIV." Accessed 4 December 2017. http://www.unaids.org/sites/default/files/media_asset/blind_spot_en.pdf

Van Heerden, A., S. Msweli, and H. Van Rooyen. 2015. "Men Don't Want Things to be Seen or Known about Them": A Mixed-Methods Study to Locate Men in a Home-Based Counselling and Testing Programme in KwaZulu-Natal, South Africa." *African Journal of AIDS Research* 14 (4): 353–359.

Wilson, P. J. 1969. “Reputation and Respectability: A Suggestion for Caribbean Ethnology.” *Man* 4 (1): 70e84.

World Health Organization. 2007. "Engaging Men and Boys in Changing Gender-Based Inequity in Health: Evidence from Programme Interventions." eneva: World Health Organization.

Wyrod, R. 2011. “Masculinity and the Persistence of AIDS Stigma.” *Culture, Health & Sexuality* 13 (4): 443–456.

Zissette, S., M. H. Watt, N. S. Prose, N. Mntambo, and M. Moshabela. 2016. “‘If "If you don’t take a stand for your life, who will help you?": Men’s engagement in HIV care in KwaZulu-Natal, South Africa.” *Psychology of Men & Masculinity* 17 (3): 265–273.